

**TITLE:****AUTHOR:** Wania Hermenegildo da Silva Ferraz**ABSTRACT**

In May 2004, in the central bus station in Londrina – Paraná, it was collected 36 samples of particle material using a Berner type Cascade Impactor of six stages. During the sampling period, at every 23 hours and 30 minutes (average), six samples of particle material were taken, referring to each stage of the impactator (fractioning of the particles at the rate of 0,06 to 15  $\mu\text{m}$  of aerodynamic diameter). The PAHs present in the membrane filter was submitted to ultrasonic extraction for 30 minutes. The samples were concentrated with a continuous stream of helium and then the HPAs present in the extractors were identified by high-performance liquid chromatography (HPLC) and UV detection with diode array detection. The PAHs was analyzed in the wavelengths ( $\lambda$ ) of maximum absorption of each species. Was used one column C18 monomeric, with a column temperature 50°C and the eluent was acetonitrile/water (3:1). In these conditions was obtained good resolution of the chromatographic peaks referring to the fluorine and anthracene. Was determined 11 HPAs in the particulate phase (naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, pyrene, benzo(a)anthracene, chrysene and benzo(b)fluoranthene). The daily concentrations of the HPAs varied between 1127 ng.m<sup>-3</sup> in the particles of 1,7  $\mu\text{m}$  to 95,34 ng.m<sup>-3</sup> in the particles of 15  $\mu\text{m}$ . The species found in greater concentration during the whole period of sampling was respectively naphthalene (average concentration of 251,4 ng.m<sup>-3</sup>), acenaphthylene (116,9 ng.m<sup>-3</sup>), benzo(a)anthracene and chrysene (109,8 ng.m<sup>3</sup>).